

# 17<sup>th</sup> SESSION

## PACIFIC ISLANDS CLIMATE OUTLOOK FORUM (PICOF-17)

# 22 – 23 October, 2025

Port Vila, Vanuatu



**PACIFIC REGIONAL  
CLIMATE CENTRE NETWORK**



# Looking Back – WNP TCs Thru Oct 2025

Brandon Bukunt – Meteorologist, NOAA NWS Pacific Region HQ





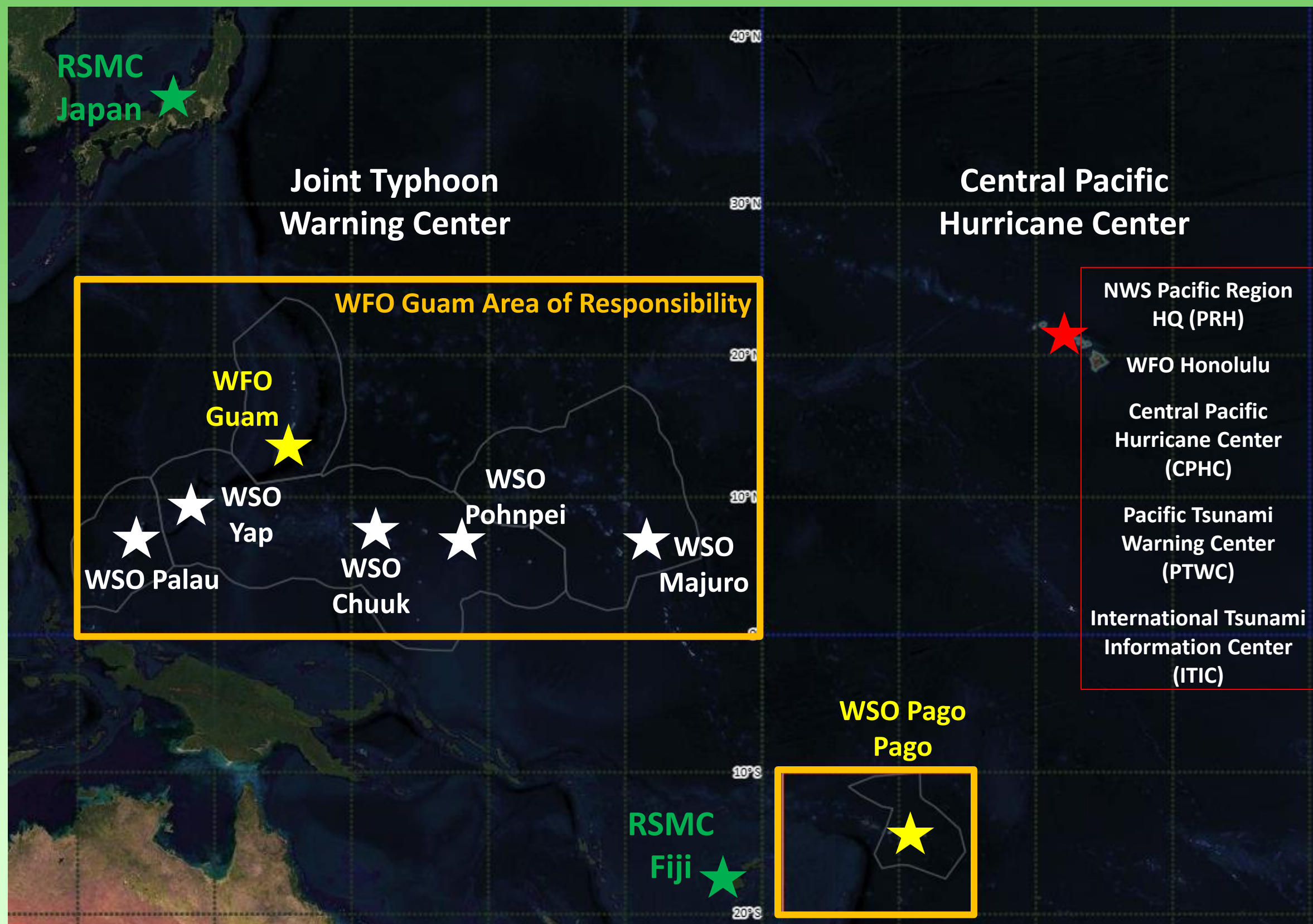
# Bottom Line Up Front

2025 Western North Pacific (WNP) Tropical cyclone (TC) activity through Oct 18 has been below normal and aligns with what one would expect during La Niña or a “La Niña-like” pattern

...similar to recent years of 2020, 2021, 2022 and 2024

Despite an overall below normal season... preparation was encouraged with the reminder that “it only takes one”

**2025 WNP Tropical Cyclones... through Oct 18**



## NWS Weather Forecast Office Guam Area of Responsibility & NWS Pacific Region

Source: NOAA NWS Pacific Region HQ

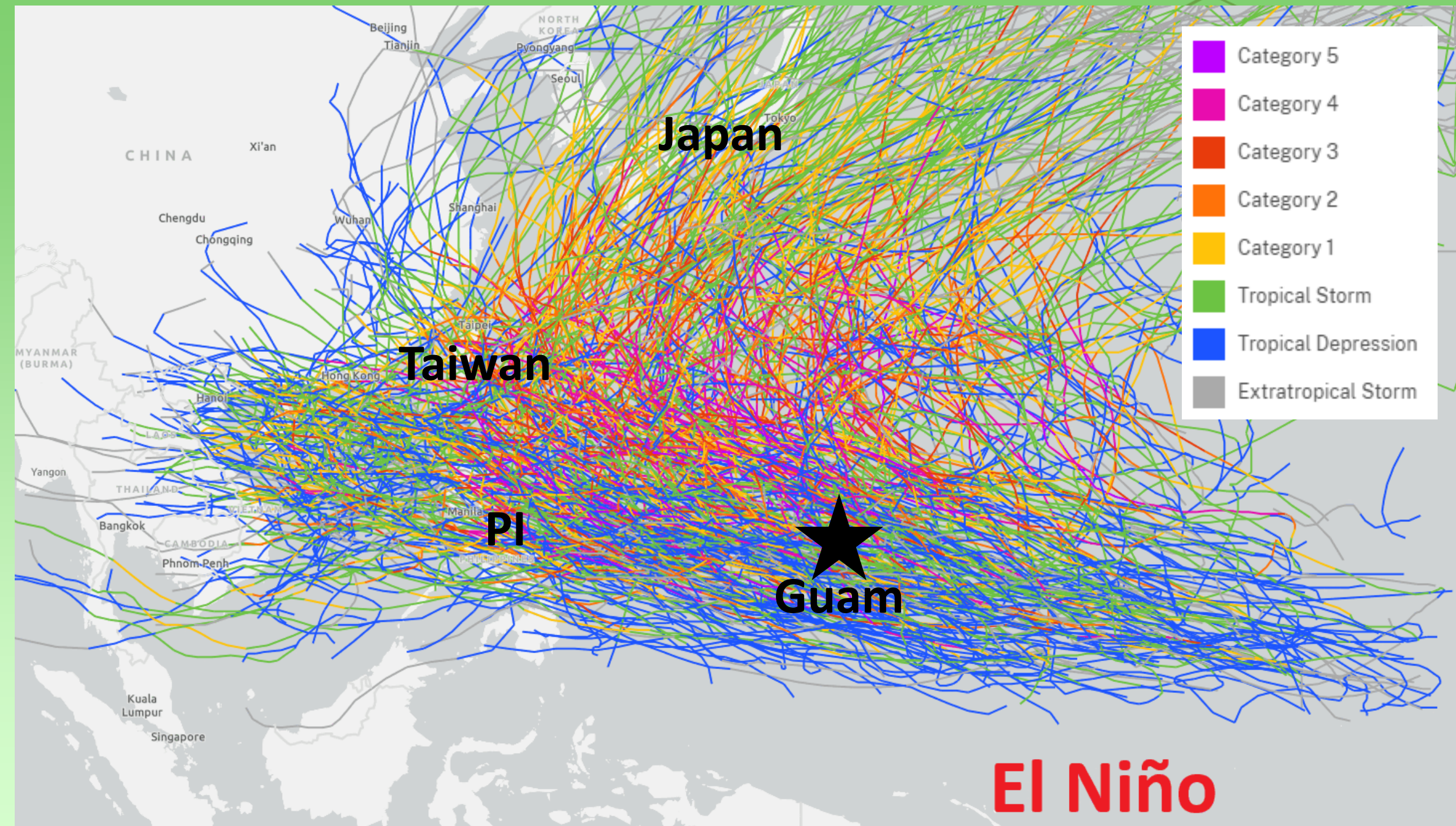


- On average, the annual number of tropical cyclones (TCs) in the western North Pacific (WNP) does not vary much
- While the total number does not change much year to year, the location of TC genesis can fluctuate significantly
- The state of ENSO is the dominant driver of this year-to-year climate variability with the location of TC genesis

Currently:

**La Niña Advisory (NOAA)**

"La Niña conditions are observed and expected to continue"



## TC Tracks and ENSO State in the WNP basin

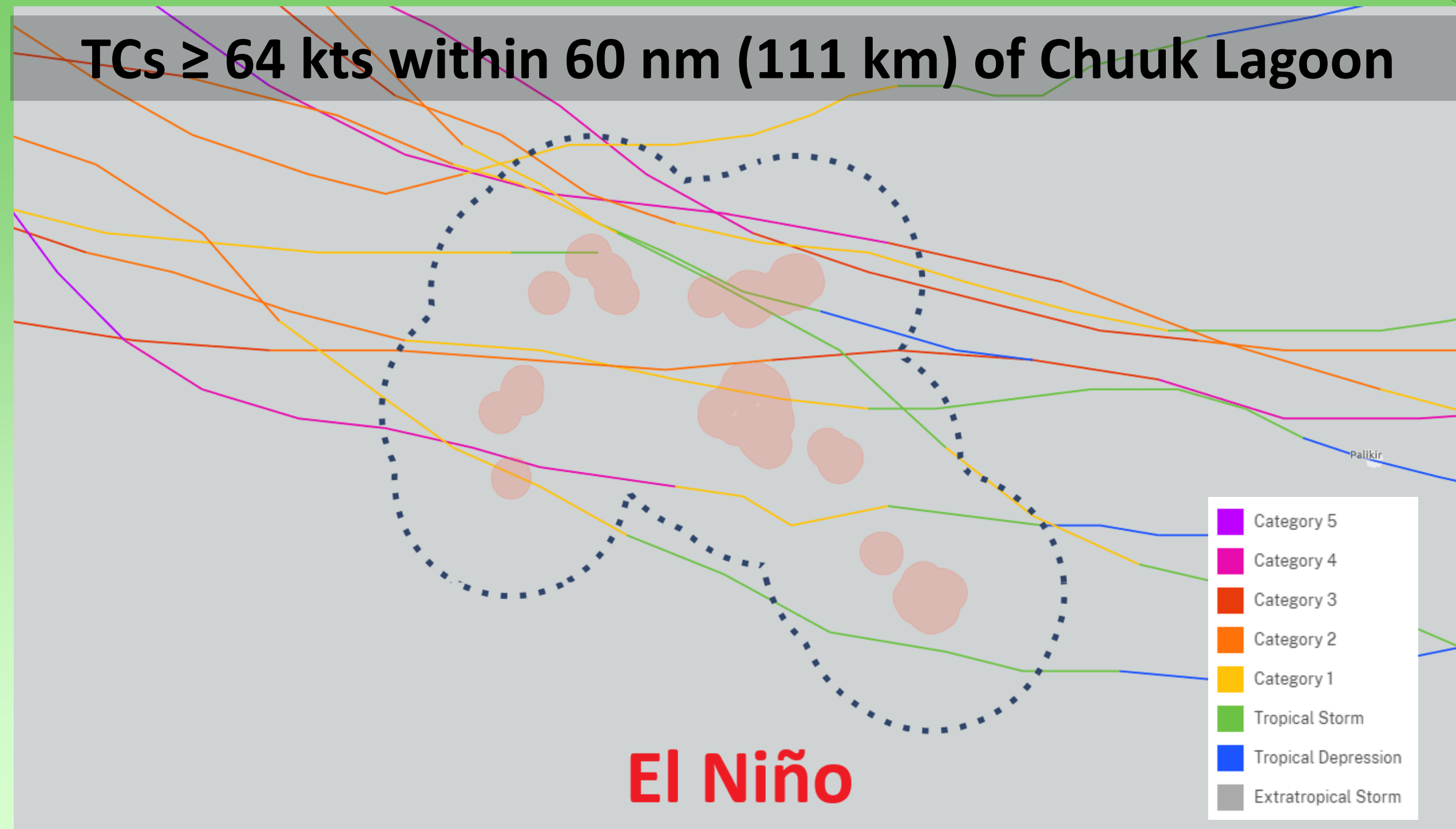
Source: [NOAA Historical Hurricane Tracks](https://www.noaa.gov/data/hurricane-archives) (IBTrACS data)



## Quick Look at Chuuk Lagoon

# of typhoons (hurricanes / severe cyclones) that track within 60 nautical miles (111 km) of Chuuk Lagoon... (since 1945)

- La Niña: 3
- Neutral: 9
- El Niño: 11

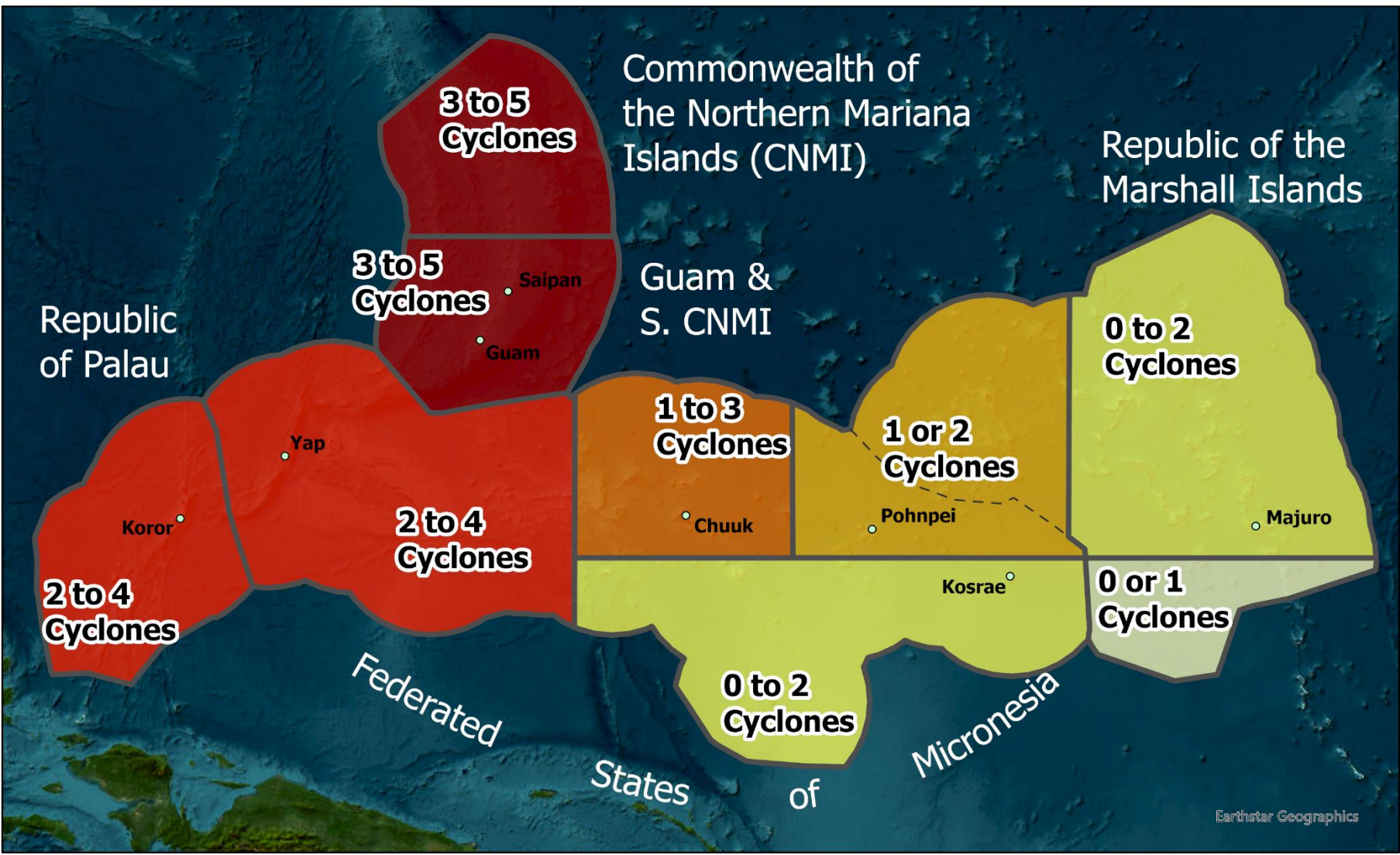


**TCs  $\geq$  64 kts within 60 nm (111 km) of Chuuk Lagoon**

Source: [NOAA Historical Hurricane Tracks](#) (IBTrACS data)



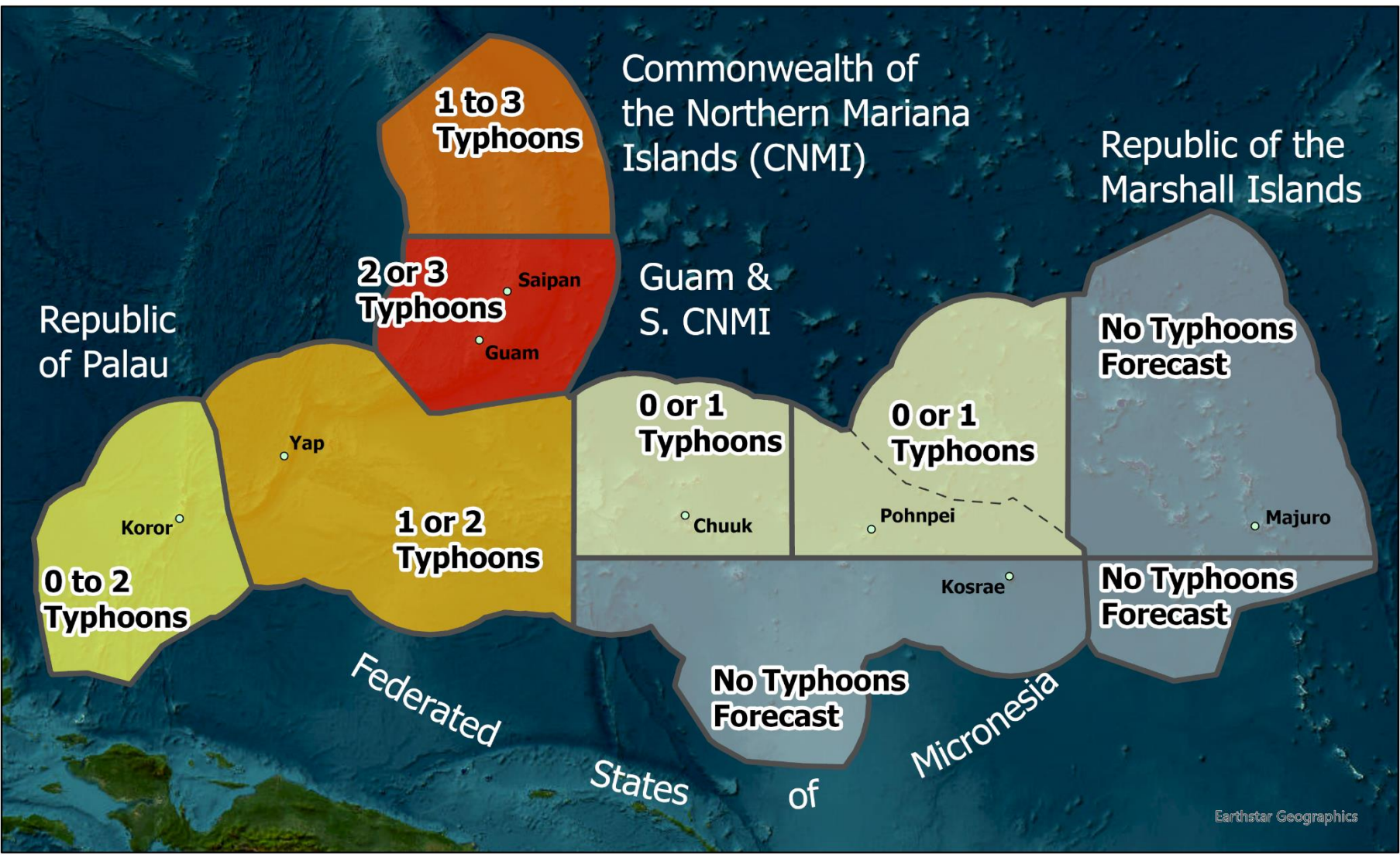
# Predicted Number of Tropical Cyclones ( $\geq 39$ mph) in the Western North Pacific



0 or 1    1 or 2    2 to 4    -- International Border  
 0 to 2    1 to 3    3 to 5    — Forecast Region Boundary

Forecast Includes Tropical Storms and Typhoons

# Predicted Number of Typhoons ( $\geq 74$ mph) in the Western North Pacific



0    0 to 2    1 to 3    -- International Border  
 0 or 1    1 or 2    2 or 3    — Forecast Region Boundary

## Western North Pacific TC Outlook (released May 22, 2025)

Source: NOAA NWS WFO Guam





REGION	NAMED STORMS ≥39 mph max sustained wind	TYPHOONS ≥74 mph max sustained wind
Marshall Islands (north of 6N)	0 to 2	0
Marshall Islands (south of 6N)	0 or 1	0
Pohnpei State (north of 6N)	1 or 2	0 or 1
Chuuk State (north of 6N)	1 to 3	0 or 1
Kosrae, Pohnpei, Chuuk States (south of 6N)	0 to 2	0
Yap State	2 to 4	1 or 2
Palau	2 to 4 (1)	0 to 2
Guam, Rota, Tinian and Saipan	3 to 5 (1)	2 or 3
Northern CNMI	3 to 5 (2)	1 to 3

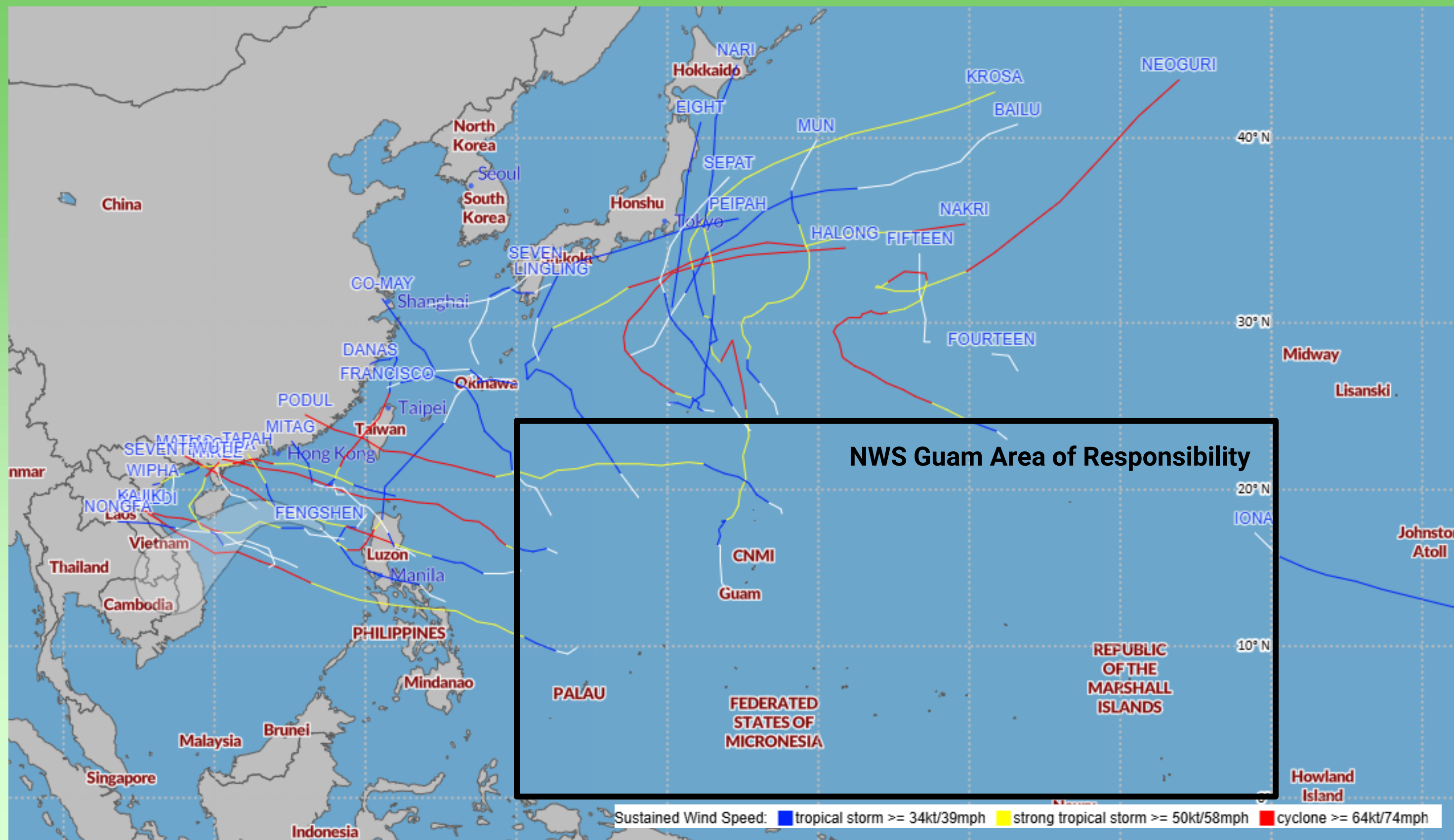
*Table 1: 2025 Tropical storm and typhoon activity outlook for various regions of Micronesia. The “Named Storms” column includes those systems, which attain tropical storm, typhoon and super typhoon intensity.*

(Activity so far in 2025)

## Western North Pacific TC Outlook (released May 22, 2025)

Source: NOAA NWS WFO Guam





## 2025 WNP Tropical Cyclones Tracks... through Oct 18

Source: Joint Typhoon Warning Center / FEMA / NOAA



# 2025 Tropical Cyclone Activity (through Oct 18)

- Above normal: number of named storms and typhoons (hurricane or severe cyclone)
- Below normal: all other metrics, especially major typhoons (100kts or greater), lifespan of major typhoons and ACE

1991-2020 Climatological Activity Through October 18 in Parentheses

Basin	Named Storms	Named Storm Days	Hurricanes	Hurricane Days	Major Hurricanes	Major Hurricane Days	Accumulated Cyclone Energy
<u>North Atlantic</u>	12 (12.5)	49.00 (60.6)	4 (6.1)	18.75 (23.9)	3 (2.8)	8.25 (6.8)	97.9 (108.3)
<u>Northeast Pacific (East of 180°)</u>	19 (15.3)	81.50 (67.4)	11 (8.3)	25.50 (26.6)	4 (4.3)	5.75 (8.9)	124.0 (123.5)
<u>Northwest Pacific (West of 180°)</u>	25 (20.8)	93.75 (104.5)	14 (12.8)	29.50 (49.6)	3 (7.3)	8.00 (18.7)	150.7 (228.7)
<u>North Indian</u>	2 (2.7)	5.25 (7.9)	1 (1.0)	1.00 (2.2)	0 (0.6)	0.00 (0.8)	5.2 (12.1)
<u>Northern Hemisphere</u>	58 (51.3)	229.50 (240.4)	30 (28.2)	74.75 (102.3)	10 (15.0)	22.00 (35.2)	377.8 (472.6)
<u>South Indian (West of 135°E)</u>	4 (0.7)	7.50 (1.6)	0 (0.1)	0.00 (0.1)	0 (0.0)	0.00 (0.0)	3.6 (1.4)
<u>South Pacific (East of 135°E)</u>	0 (0.1)	0.00 (0.4)	0 (0.0)	0.00 (0.0)	0 (0.0)	0.00 (0.0)	0 (0.2)
<u>Southern Hemisphere</u>	4 (0.8)	7.50 (2.0)	0 (0.1)	0.00 (0.1)	0 (0.0)	0.00 (0.0)	3.6 (1.6)

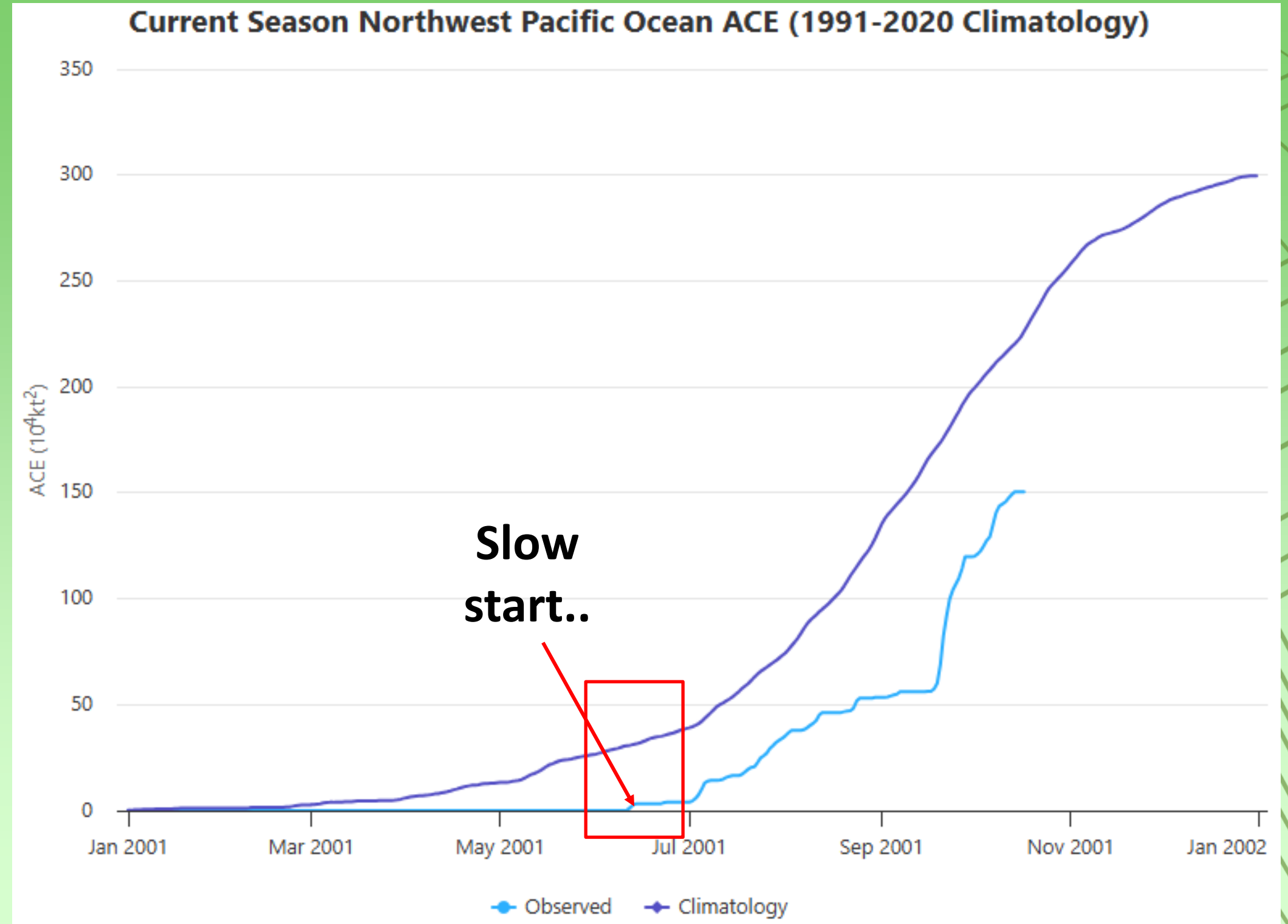
## 2025 so far (through October 18)

Source: JTWC data via <https://tropical.atmos.colostate.edu/Realtime/>



## Accumulated Cyclone Energy (ACE)

- ACE is another measure of TC activity...
  - Weaker, short-lived TCs produce minimal ACE whereas very intense, long- duration TCs produce big ACE values
  - 2025 ACE is ~65-70% of normal
  - Lower than normal ACE matches with a La Niña setup of TC tracks



**2025 so far (through October 18)**

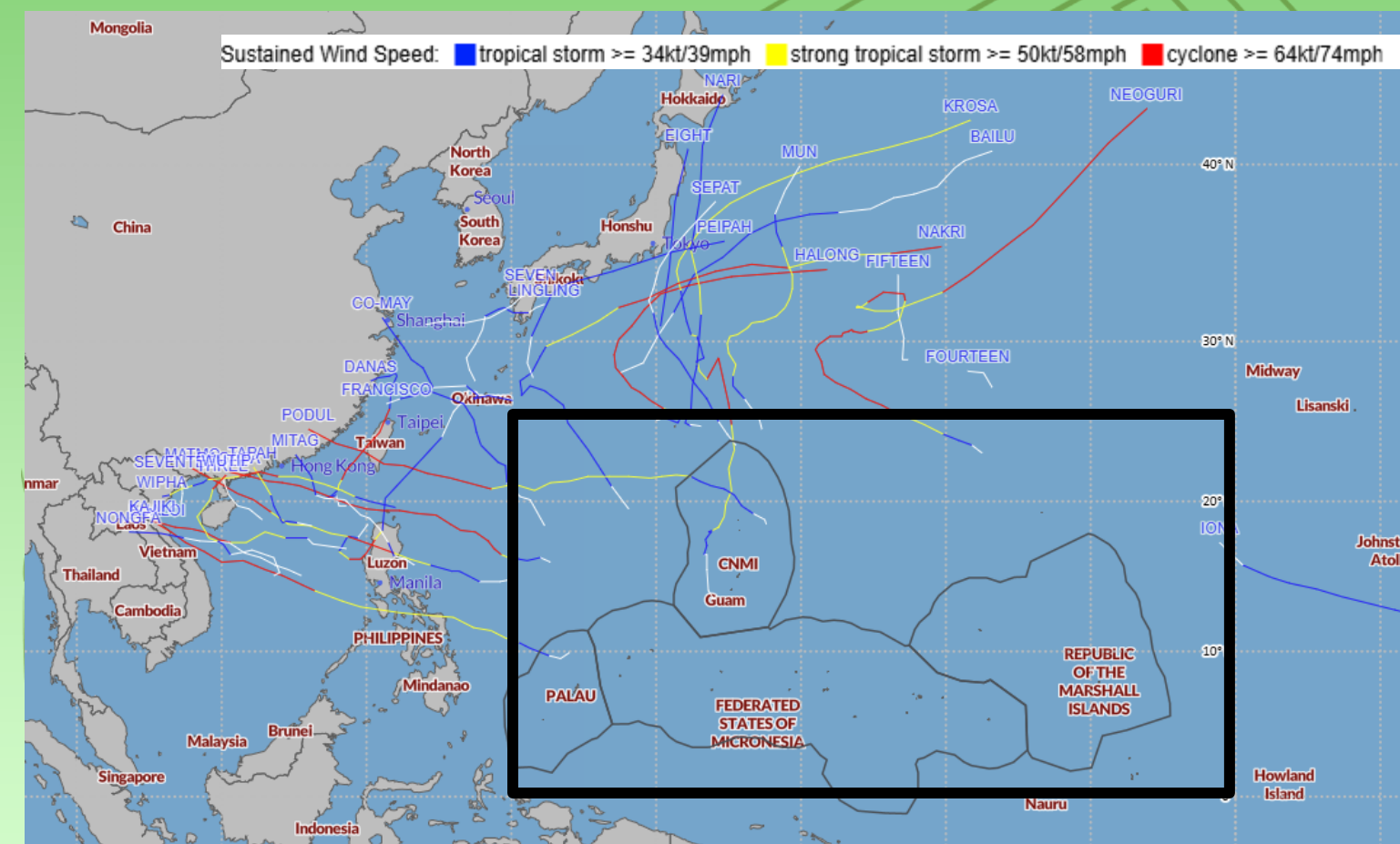
Source: <https://tropical.atmos.colostate.edu/Realtime/index.php?loc=northwestpacific>



Preliminary Data

# 2025 WNP Basin By the Numbers...so far...

- **Very slow start**
  - Wutip was the first TC... named on June 12, 2025... this is the 3<sup>rd</sup> latest on record for a named storm (JTWC data since 1945)
- 30 TCs (depression strength or greater) +1
  - +1 (Iona) entered WNP basin from the Central Pacific
- 25 named TCs (34kts or greater)
- Top 3 Most Intense TCs
  - Ragasa (145kt) / Neoguri (125kt) / Halong (120kt)
- Similar overall tracks as 2020, 2021, 2022, 2024
- Only 3 TCs in the EEZs of Micronesia region (negligible impacts)
- Great impacts felt in Philippines & China from Ragasa and Vietnam from Bualoi (big flood impacts) \*Defer to other NMHSs and ESCAP/WMO Typhoon Committee for additional details\*



## 2025 WNP Tropical Cyclones... through Oct 18

Source: Joint Typhoon Warning Center / FEMA / NOAA

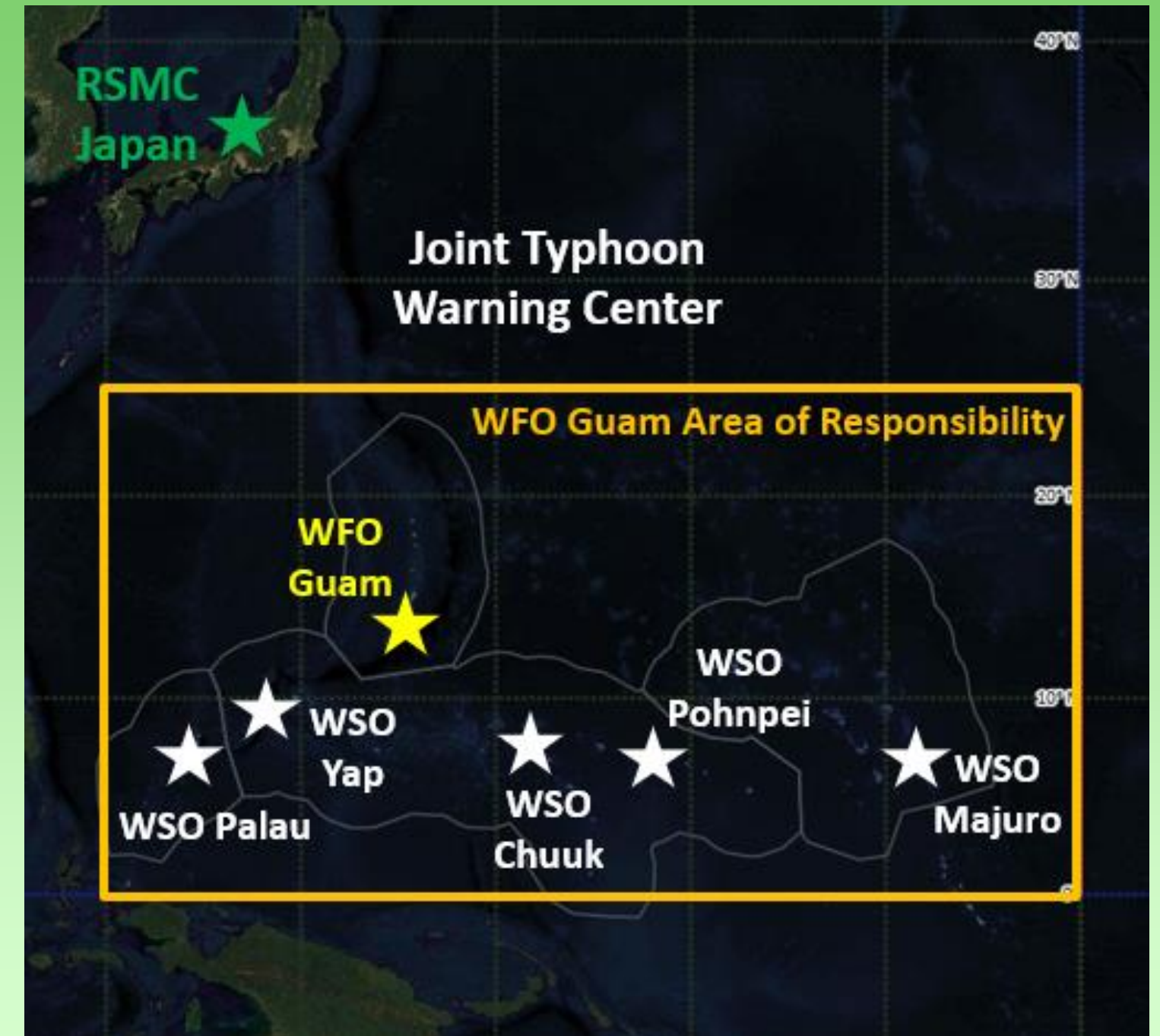


## With Respect to WFO Guam Area of Responsibility

- 12 TCs tracked within WFO Guam's area of responsibility (AOR)
- Only 2 TCs (Krosa and Podul) prompted WFO Guam to issue cyclone products (TC watches or warnings)
- Negligible impacts for Micronesia with TC genesis region displaced to the northwest



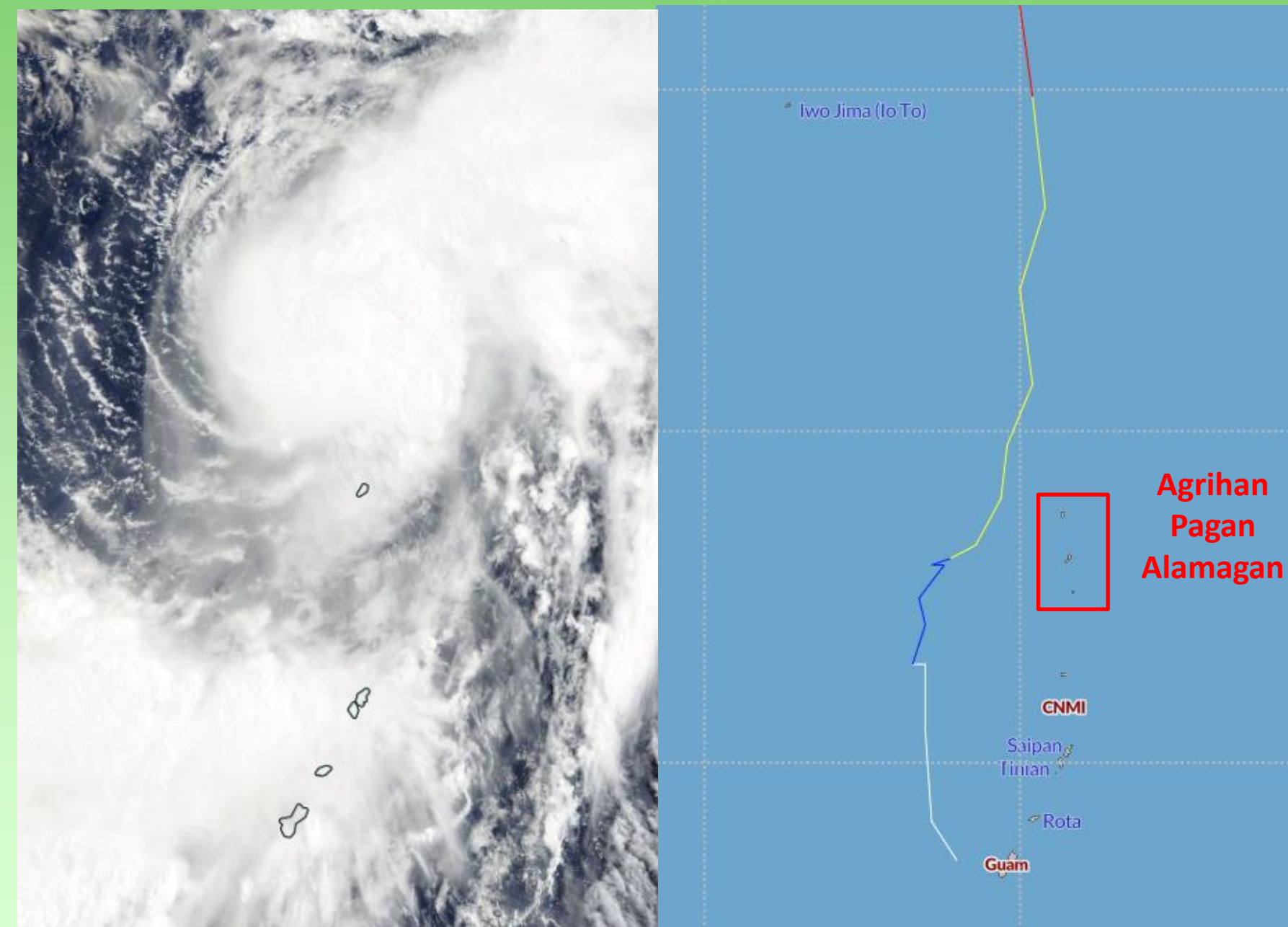
[Aligns with a La Niña pattern](#)





# Krosa (12W) – 24 July through 3 August

- Developed just west of the southern Marianas and lifted north + intensified
- WFO Guam issued TS Watches for Rota, Tinian, Saipan, Agrihan, Pagan and Alamagan
  - TS Watch was upgraded to a TS warning for Agrihan, Pagan and Alamagan due to continued intensification and expanding wind field
- Some coastal inundation reported on west coast of the Marianas
  - Sea levels ~20-25 cm higher than normal due to La Nina-like pattern
  - new moon high tides
  - short-period stormy westerly swells > 3 meters)



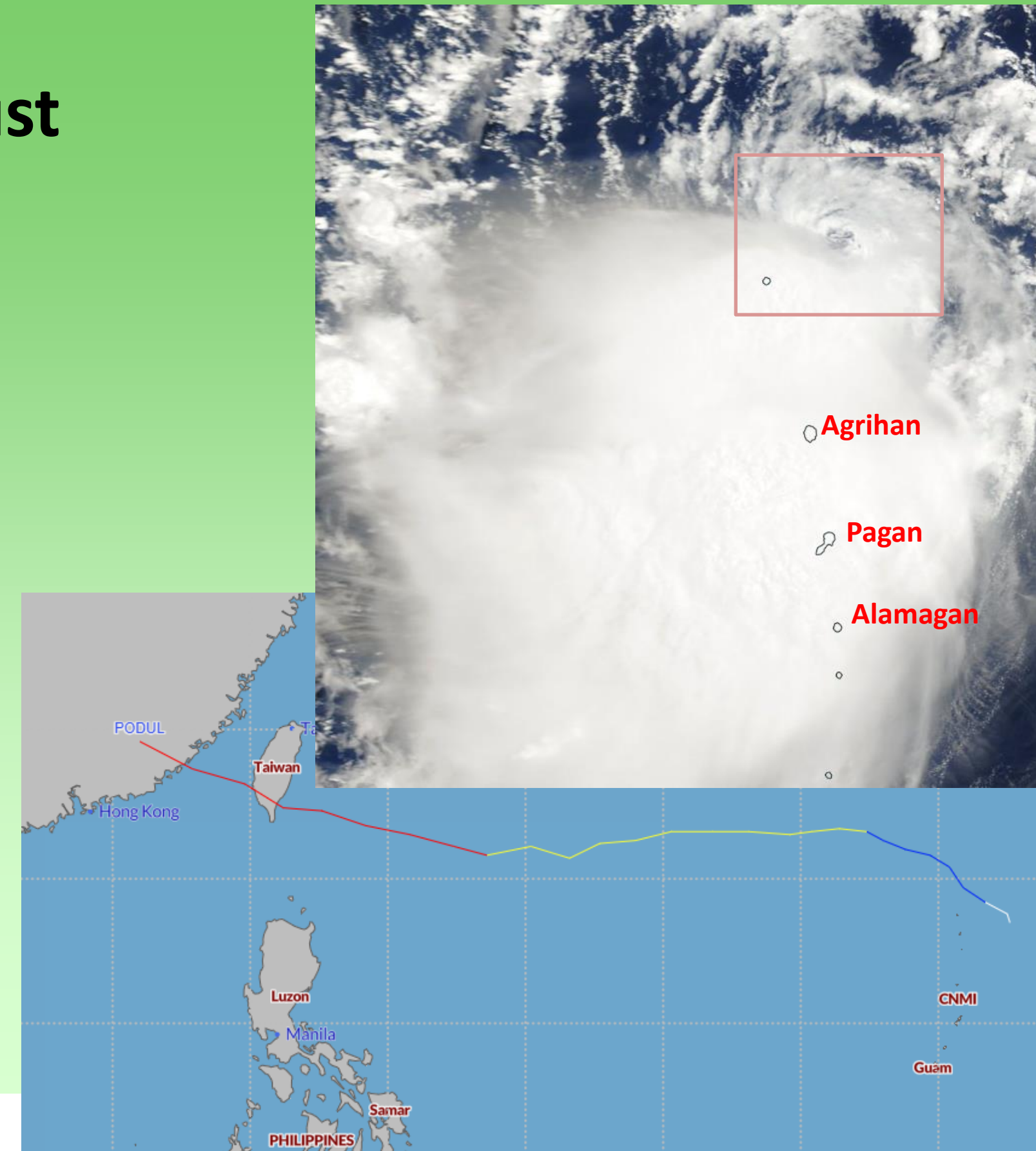
## Track of Krosa (12W) and MODIS True Color Imagery

Source: JTWC / FEMA and NASA



# Podul (16W) – 7 August through 15 August

- Developed quickly and a bit unexpectedly just east of Pagan (far northern islands of the CNMI) on August 7<sup>th</sup>
- WFO Guam issued TS Watches for the Agrihan, Pagan and Alamagan due to uncertainty in track forecast
- Northeast shear led to the low level circulation center becoming exposed during the afternoon of Aug 7
- See [WFO Guam Post Tropical Cyclone Reports](#) for more info



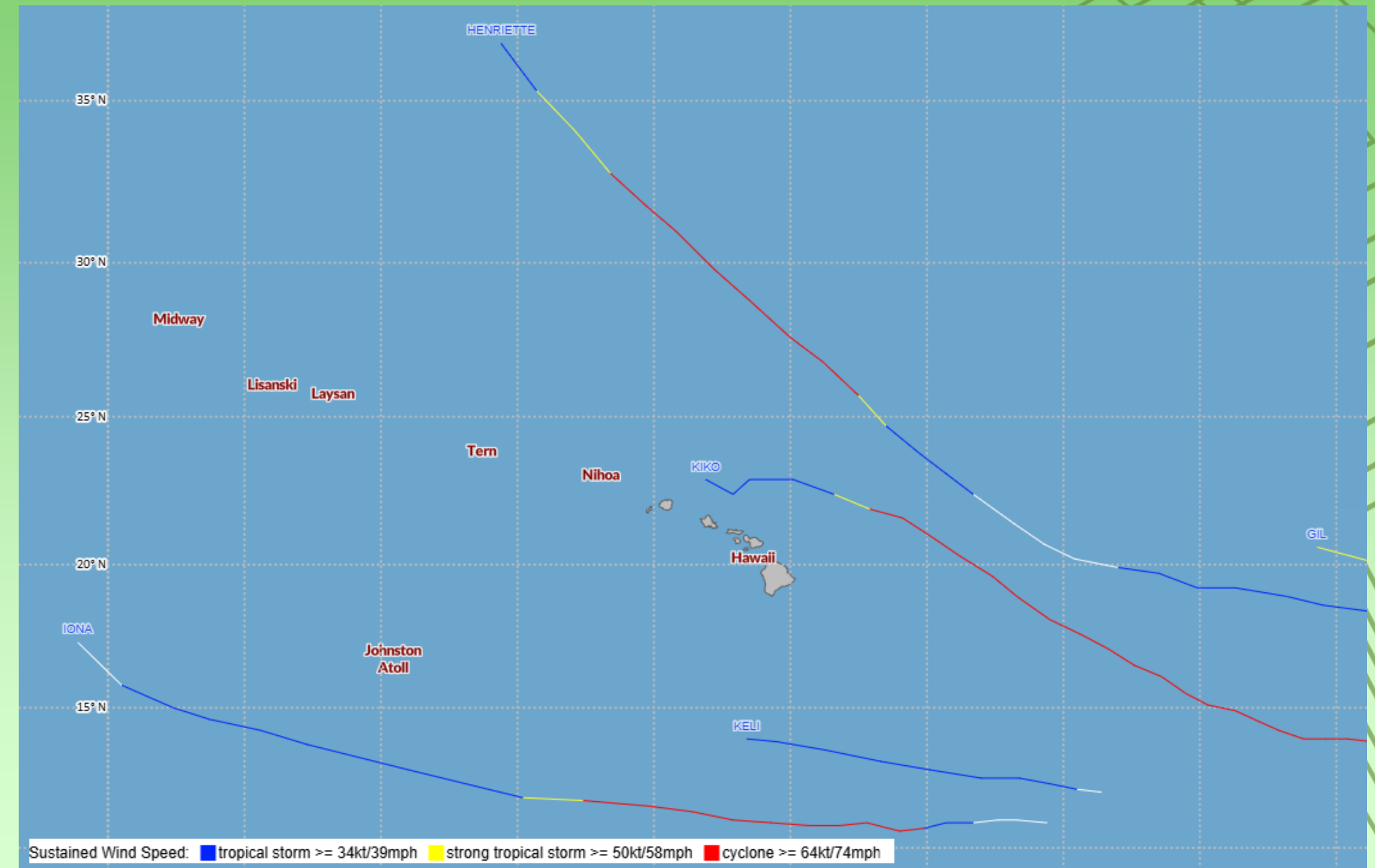
## Track of Podul (16W) and MODIS True Color Image on August 7<sup>th</sup>

Source: JTWC / FEMA and NASA



# 2025 Central Pacific By the Numbers...so far...

- Season runs from June 1 – November 30
- Average season with 4 TCs (typical year has 4-5 TCs)
- Minimal impacts for Hawaii and outer islands
  - however... drought may have worsened due to lack of TCs (or remnants) passing over the island chain



## 2025 CP Tropical Cyclones... thru Oct 18

Source: NOAA CPHC / FEMA



# Summary

Add key points which will be included in the PICO outcomes statement

## BASIS FOR 2025 TC OUTLOOK

- Model guidance indicated ENSO-Neutral during early 2025 would shift to the cool side of ENSO-neutral during the July/August/September timeframe. Some models even indicated a decent chance of La Niña during the last quarter of 2025
- This trend towards a La Niña base state formed the basis for below normal TC activity for the U.S. Affiliated Pacific Islands (USAPI) of the western North Pacific (WNP) as outlined in WFO Guam's TC outlook, issued on May 22.

## 2025 TC ACTIVITY THUS FAR

- 2025 TC activity in the WNP basin has, so far, been indicative of a climate pattern shifting towards La Niña, with TC genesis and tracks favoring areas west and north of the USAPI. TC impacts have been minimal for the USAPI thus far in 2025.
- Overall, 2025 TC activity in the WNP basin has been fairly similar to that of 2020-2022 and 2024 (La Niña or “La Niña-like” years)





# THANK YOU!

Brandon Bukunt  
[brandon.bukunt@noaa.gov](mailto:brandon.bukunt@noaa.gov)



**PACIFIC REGIONAL**  
CLIMATE CENTRE NETWORK